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PTO/SB/21 (04-04)

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/608,280
	Filing Date	June 27, 2003
	First Named Inventor	Zeira et al.
	Art Unit	2681
	Examiner Name	Not Yet Known
Total Number of Pages in This Submission	Attorney Docket Number	I-2-0277.1US

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks Transmittal Form with Certificate of First Class Mailing; (1 pg.) Communication Re Favorable IPER by IPEA/US in Corresponding International Application (2 pgs.); Copy of IPER including approved claims (9 pgs.); and Copy of Reply to Written Opinion filed on June 14, 2004(12 pgs.).		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	John C. Donch Jr. Reg. No. 43,593 Volpe and Koenig, P.C.
Signature	
Date	August 25, 2004

CERTIFICATE OF TRANSMISSION/MAILING	
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.	
Typed or printed name	John C. Donch Jr.
Signature	
Date	August 25, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Zeira et al.

Application No.: 10/608,280

Confirmation No.: 8517

Filed: June 27, 2003

For: METHOD AND SYSTEM FOR
DETERMINING CORRECT ESCAPE
MECHANISMS AND CONTROLLING
INTERFERENCE IN THIRD GENERATION
WIRELESS SYSTEMS

Group: 2681

Examiner: Not Yet Known

Our File: I-2-0277.1US

Date: August 25, 2004

**COMMUNICATION RE FAVORABLE IPER BY
IPEA/US IN CORRESPONDING INTERNATIONAL APPLICATION**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is to advise the Examiner of the favorable International Preliminary Examination Report (IPER) issued by the United States Patent and Trademark Office acting as International Preliminary Examination Authority in a corresponding PCT application. A copy of the IPER is enclosed.

The original PCT claims correspond to the claims in this U.S. application. A copy of the approved claims is included in the IPER because the PCT claims were amended pursuant to a Reply to Written Opinion filed on June 14, 2004 to address

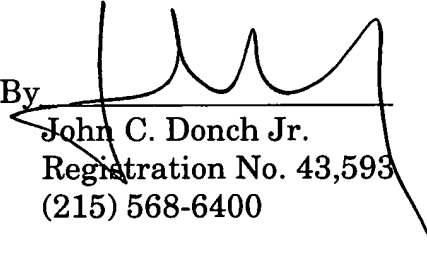
Applicant: Zeira et al.
Application No.: 10/608,280

minor formalistic issues. For convenience, a copy of that Reply is also enclosed herewith.

In view of the fact that PCT claims 1-16 have all been found to meet the international standards of patentability, prompt examination and allowance are respectfully requested.

Respectfully submitted,

Zeira et al.

By 
John C. Donch Jr.
Registration No. 43,593
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103

JCD/dmr

Enclosures (2)

PATENT COOPERATION TREATY

RECEIVED
AMIPM

JUL 23 2004

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
ANTHONY S. VOLPE
VOLPE AND KOENIG, P.C.
UNITED PLAZA, SUITE 1600
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

PCT
VOLPE & KOENIG, P.C.
NOTIFICATION OF TRANSMITTAL OF
INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing
(day/month/year)

21 JUL 2004

Applicant's or agent's file reference

I-2-0277.1W@

IMPORTANT NOTIFICATION

International application No.

International filing date (day/month/year)

Priority date (day/month/year)

PCT/US03/20475

27 June 2003 (27.06.2003)

28 June 2002 (28.06.2002)

Applicant

INTERDIGITAL TECHNOLOGY CORPORATION

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US

Mail Stop PCT, Attn: IPEA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

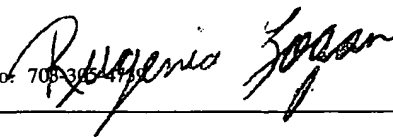
Facsimile No. (703)305-3230

Form PCT/IPEA/416 (July 1992)

Authorized officer

Dang Ton

Telephone No. 703-305-4445



PATENT COOPERATION TREATY

RECEIVED

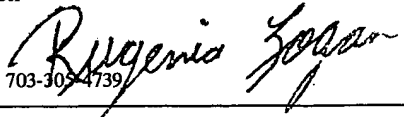
AM/PM

PCT

JUL 23 2004

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

VOLPE & KOENIG, P.C.

Applicant's or agent's file reference I-2-0277.1WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/20475	International filing date (day/month/year) 27 June 2003 (27.06.2003)	Priority date (day/month/year) 28 June 2002 (28.06.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04J 1/16, 3/14; H04L 1/00, 12/26, 12/28 and US Cl.: 370/252, 276, 277, 278, 280, 281, 317, 318, 320, 321, 332, 333, 342; 375/146, 147, 148, 152, 227; 45		
Applicant INTERDIGITAL TECHNOLOGY CORPORATION		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>5</u> sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 13 November 2003 (13.11.2003)	Date of completion of this report 07 July 2004 (07.07.2004)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Dang Ton Telephone No. 703-305-4739 	

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/20475

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed.
- ☒ the description:
pages 1-13 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the claims:
pages NONE, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages 14-18, filed with the letter of 14 June 2004 (14.06.2004)
- ☒ the drawings:
pages 1-5, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/20475**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-16</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-16</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-16</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-16 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the method of communication for evaluating downlink and uplink interferences in transmission using time-slots including the step of measuring interference in at least two time slots; computing the variance of the measured interference between the time slots if the interference in active slots is above a predetermined value; employing time division duplex escape mechanisms if the variance is not below the predetermined value; and employing a handover escape mechanism if the variance is below the predetermined value as recited in claims 1-6, 15, and 16; the method for determining an appropriate escape mechanism based on the type of interference encountered during a transmission as recited in claim 7-13; and likewise, the method for controlling interference in coexisting FDD and TDD systems where a TDD user is experiencing interference as in claim 14.

----- NEW CITATIONS -----
NONE

CLAIMS

VOLPE & KOENIG, P.C.

What is claimed is:

1. A method for evaluating downlink interference in a transmission having one or more communicates in a plurality of time-slots, the method comprising:

measuring interference in at least two of said time slots;

computing the variance of said measured interference between said time slots if said measured interference in active slots is above a first predetermined value;

employing time division duplex escape mechanisms if the variance is not below a second predetermined value; and

employing a handover escape mechanism if the variance is below the second predetermined value.

2. The method of claim 1 wherein the measure of variance is computed based on downlink time slots.

3. The method of claim 1 wherein the measure of variance is computed based on downlink time slots and uplink time slots.

4. A method for evaluating uplink interference to determine a correct escape mechanism according to interference type, the method comprising:

arranging uplink transmission so that interference may be measured at all time slots;

measuring interference to obtain a sampling of interference in the uplink time slots;

computing a measure of variance between time slots if interference in active slots is above a first predetermined value;

employing time division duplex escape mechanisms if the variance is not below a second predetermined value; and
reducing cell load if the variance is below the second predetermined value.

5. The method of claim 4 wherein the measure of variance is computed based on uplink time slots.

6. The method of claim 4 wherein the measure of variance is computed based on uplink time slots and downlink time slots.

7. A method for determining an appropriate escape mechanism based on a type of interference encountered during a transmission, the method comprising:
receiving transmissions of a predetermined signal category;
arranging said transmissions to a predetermined group of slots, so that interference may be measured at all of said slots;
measuring interference at all of said slots;
time averaging the measured interference to create time averaged values, and transmitting the time averaged values to a radio network controller;
evaluating the time averaged interference measurements to determine whether interference with respect to a first predetermined value;
in the case of the interference measurements below the first predetermined value, accepting the transmissions;
in the case of the interference measurements above the first predetermined value, computing a measure of variance between slots and determining the variance with respect to a second predetermined value for the variance;

in the case of the interference variance below the second predetermined value for the variance, executing a handover as an escape mechanism;

in the case of the interference variance above the second predetermined value for the variance, executing a time division duplex (TDD) escape mechanism for discontinuous interference.

8. The method of claim 7, wherein the execution of the handover includes changing to a different carrier frequency.

9. The method of claim 7, wherein the execution of the handover includes changing to a different access mode.

10. The method of claim 7 comprising making the determination of the appropriate escape mechanism for an uplink transmission.

11. The method of claim 7 comprising making the determination of the appropriate escape mechanism for a downlink transmission.

12. The method of claim 7 comprising making the effecting the appropriate escape mechanism in accordance with the measured interference includes uplink interference or downlink interference.

13. The method of claim 7 further comprising:

determining if a frequency division duplex (FDD) carrier band from a FDD WTRU exists in a time division duplex (TDD) area and thereby causing said interference;

determining a location of the FDD wireless transmit and receive unit (WTRU);

communicating the location to a radio controller able to provide control of said FDD WTRU;

enabling a handover action for said FDD WTRU carrier band, thereby reducing interference caused by communications of the FDD WTRU.

14. A method for controlling interference in coexisting frequency division duplex (FDD) and time division duplex (TDD) systems where a TDD user is experiencing interference, the method comprising:

handing over wireless transmit and receive units (WTRUs) located in an area with TDD and FDD service and operating in a carrier band that is adjacent to a TDD carrier band from the adjacent carrier band to a carrier band that is alternate to the TDD carrier; and

handing over WTRUs located in an area with FDD service and operating in the alternate carrier band from the alternate carrier band to the adjacent carrier band.

15. A wireless transmit and receive unit (WTRU) capable of providing an escape mechanism according to interference type, the WTRU comprising:

an uplink transmitter;

a circuit for measuring interference in a plurality of uplink time slots;

a circuit for transmitting the measured interference to a radio network controller through the uplink transmitter, wherein the radio network controller can compute a measure of variance between the time slots if interference in active time slots exceeds a first predetermined value; and

a circuit for employing time division duplex escape mechanisms if the variance is above a second predetermined value and employing a handover escape mechanism if the variance is below the second predetermined value.

16. A wireless communications network in which a plurality of wireless transmit and receive units (WTRUs) communicate with a plurality of base stations, and the WTRUs utilize an escape mechanism according to interference type, the network comprising:

a circuit for scheduling transmission so that interference may be measured at all of a predetermined group of time slots;

a circuit for providing measured interference to a radio network controller and computing a measure of variance between the time slots if interference in active time slots is above a first predetermined value; and

a circuit for employing time division duplex escape mechanisms in the case of the variance above a second predetermined value, and employing a handover escape mechanism in the case of the variance below the second predetermined value.

Express Mail Label No.: EV 396082996 US

**IN THE INTERNATIONAL PRELIMINARY EXAMINING
AUTHORITY UNITED STATES PATENT AND TRADEMARK OFFICE**

In the PCT APPLICATION of:

InterDigital Technology Corporation

Application No.: PCT/US03/20475

Filed: 27 June 2003

**For: METHOD AND SYSTEM FOR
DETERMINING CORRECT
ESCAPE MECHANISMS AND
CONTROLLING INTERFERENCE
IN THIRD GENERATION
WIRELESS SYSTEMS**

Authorized Officer: Dang Ton

File: I-2-0277.1WO

Date: 14 June 2004

**12 PAGES VIA FACSIMILE
TO 703-305-3230
ORIGINAL TO FOLLOW
VIA EXPRESS MAIL**

**REPLY TO WRITTEN OPINION
WITH ARTICLE 34 AMENDMENT**

**IPEA-US
Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

Sir:

This Reply is responsive to the Written Opinion dated 14 April 2004.

REMARKS

Claims 1-16 are pending in this application. New substitute sheets 14-18 for claims are submitted herewith for original sheets 14-18. An annotated version of the new substitute sheets 14-18 are also submitted herewith. The Applicant notes with appreciation the Examiner's positive determination of claims 1-16 with respect to novelty, inventive step, and industrial applicability.

In the Written Opinion, the Examiner made several minor objections based on formalities under PCT Rule 66.2(a)(iii) with respect to claims 1-13 and 15-16.

Accordingly, the Applicant has amended claims 1, 4, 7, 15, and 16 to correct lack of antecedent basis and to define the scope of the claims more particularly. The Applicant has also amended claims 7, 13, and 14 spelling out the acronyms TDD, FDD, and WTRU.

For the reasons stated above, it is respectfully submitted that the pending claims are allowable.

Respectfully submitted,

InterDigital Technology Corporation

By

John C. Donch

Telephone: 215-568-6400

Facsimile: 215-568-6499

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103

JCD/dmr

ANNOTATED CLAIMS

What is claimed is:

1. A method for evaluating downlink interference in a transmission having one or more communicates in a plurality of time-slots, the method comprising:

measuring interference in at least two of said time slots;

computing the variance of said measured interference between said time slots if said measured interference in active slots is above a first predetermined value;

employing time division duplex escape mechanisms if the variance is not below a second predetermined value; and

employing a handover escape mechanism if the variance is below a the second predetermined value.

2. The method of claim 1 wherein the measure of variance is computed based on downlink time slots.

3. The method of claim 1 wherein the measure of variance is computed based on downlink time slots and uplink time slots.

4. A method for evaluating uplink interference to determine a correct escape mechanism according to interference type, the method comprising:

arranging uplink transmission so that interference may be measured at all time slots;

measuring interference to obtain a sampling of interference in the uplink time slots;

computing a measure of variance between time slots if interference in active slots is above a first predetermined value;

employing time division duplex escape mechanisms if the variance is not below a second predetermined value; and

reducing cell load if the variance is below a the second predetermined value.

5. The method of claim 4 wherein the measure of variance is computed based on uplink time slots.

6. The method of claim 4 wherein the measure of variance is computed based on uplink time slots and downlink time slots.

7. A method for determining an appropriate escape mechanism based on a type of interference encountered during a transmission, the method comprising:

receiving transmissions of a predetermined signal category;

arranging said transmissions to a predetermined group of slots, so that interference may be measured at all of said slots;

measuring interference at all of said slots;

time averaging the measured interference to create time averaged values, and transmitting the time averaged values to a radio network controller;

evaluating the time averaged interference measurements to determine whether interference with respect to a first predetermined value;

in the case of the interference measurements below the first predetermined value, accepting the transmissions;

in the case of the interference measurements above the first predetermined value, computing a measure of variance between slots and determining the variance with respect to a second predetermined value for the variance;

in the case of the interference variance below the second predetermined value for the variance, executing a handover as an escape mechanism;

in the case of the interference variance above the second predetermined value for the variance, executing a time division duplex (TDD) escape mechanism for discontinuous interference.

8. The method of claim 7, wherein the execution of the handover includes changing to a different carrier frequency.

9. The method of claim 7, wherein the execution of the handover includes changing to a different access mode.

10. The method of claim 7 comprising making the determination of the appropriate escape mechanism for an uplink transmission.

11. The method of claim 7 comprising making the determination of the appropriate escape mechanism for a downlink transmission.

12. The method of claim 7 comprising making the effecting the appropriate escape mechanism in accordance with the measured interference includes uplink interference or downlink interference.

13. The method of claim 7 further comprising:

determining if an frequency division duplex (FDD) carrier band from a FDD WTRU exists in a time division duplex (TDD) area and thereby causing said interference;

determining a location of the FDD wireless transmit and receive unit (WTRU);

communicating the location to a radio controller able to provide control of said FDD WTRU;

enabling a handover action for said FDD WTRU carrier band, thereby reducing interference caused by communications of the FDD WTRU.

14. A method for controlling interference in coexisting frequency division duplex (FDD) and time division duplex (TDD) systems where a TDD user is experiencing interference, the method comprising:

handing over wireless transmit and receive units (WTRUs) located in an area with TDD and FDD service and operating in a carrier band that is adjacent to a TDD carrier band from the adjacent carrier band to a carrier band that is alternate to the TDD carrier; and

handing over WTRUs located in an area with FDD service and operating in the alternate carrier band from the alternate carrier band to the adjacent carrier band.

15. A wireless transmit and receive unit (WTRU) capable of providing an escape mechanism according to interference type, the WTRU comprising:

an uplink transmitter;

a circuit for measuring interference in a plurality of uplink time slots;

a circuit for transmitting the measured interference to a radio network controller through the uplink transmitter, wherein the radio network controller can compute a measure of variance between the time slots if interference in active time slots exceeds a first predetermined value; and

a circuit for employing time division duplex escape mechanisms if the variance is above ~~the~~ a second predetermined value and employing a handover escape mechanism if the variance is below the second predetermined value.

16. A wireless communications network in which a plurality of wireless transmit and receive units (WTRUs) communicate with a plurality of base stations, and the WTRUs utilize an escape mechanism according to interference type, the network comprising:

- a circuit for scheduling transmission so that interference may be measured at all of a predetermined group of time slots;

- a circuit for providing measured interference to a radio network controller and computing a measure of variance between the time slots if interference in active time slots is above a first predetermined value; and

- a circuit for employing time division duplex escape mechanisms in the case of the variance above a second predetermined value, and employing a handover escape mechanism in the case of the variance below a the second predetermined value.

CLAIMS

What is claimed is:

1. A method for evaluating downlink interference in a transmission having one or more communicates in a plurality of time-slots, the method comprising:

measuring interference in at least two of said time slots;

computing the variance of said measured interference between said time slots if said measured interference in active slots is above a first predetermined value;

employing time division duplex escape mechanisms if the variance is not below a second predetermined value; and

employing a handover escape mechanism if the variance is below the second predetermined value.

2. The method of claim 1 wherein the measure of variance is computed based on downlink time slots.

3. The method of claim 1 wherein the measure of variance is computed based on downlink time slots and uplink time slots.

4. A method for evaluating uplink interference to determine a correct escape mechanism according to interference type, the method comprising:

arranging uplink transmission so that interference may be measured at all time slots;

measuring interference to obtain a sampling of interference in the uplink time slots;

computing a measure of variance between time slots if interference in active slots is above a first predetermined value;

employing time division duplex escape mechanisms if the variance is not below a second predetermined value; and

reducing cell load if the variance is below the second predetermined value.

5. The method of claim 4 wherein the measure of variance is computed based on uplink time slots.

6. The method of claim 4 wherein the measure of variance is computed based on uplink time slots and downlink time slots.

7. A method for determining an appropriate escape mechanism based on a type of interference encountered during a transmission, the method comprising:

receiving transmissions of a predetermined signal category;

arranging said transmissions to a predetermined group of slots, so that interference may be measured at all of said slots;

measuring interference at all of said slots;

time averaging the measured interference to create time averaged values, and transmitting the time averaged values to a radio network controller;

evaluating the time averaged interference measurements to determine whether interference with respect to a first predetermined value;

in the case of the interference measurements below the first predetermined value, accepting the transmissions;

in the case of the interference measurements above the first predetermined value, computing a measure of variance between slots and determining the variance with respect to a second predetermined value for the variance;

in the case of the interference variance below the second predetermined value for the variance, executing a handover as an escape mechanism;

in the case of the interference variance above the second predetermined value for the variance, executing a time division duplex (TDD) escape mechanism for discontinuous interference.

8. The method of claim 7, wherein the execution of the handover includes changing to a different carrier frequency.

9. The method of claim 7, wherein the execution of the handover includes changing to a different access mode.

10. The method of claim 7 comprising making the determination of the appropriate escape mechanism for an uplink transmission.

11. The method of claim 7 comprising making the determination of the appropriate escape mechanism for a downlink transmission.

12. The method of claim 7 comprising making the effecting the appropriate escape mechanism in accordance with the measured interference includes uplink interference or downlink interference.

13. The method of claim 7 further comprising:

determining if a frequency division duplex (FDD) carrier band from a FDD WTRU exists in a time division duplex (TDD) area and thereby causing said interference;

determining a location of the FDD wireless transmit and receive unit (WTRU);

communicating the location to a radio controller able to provide control of said FDD WTRU;

enabling a handover action for said FDD WTRU carrier band, thereby reducing interference caused by communications of the FDD WTRU.

14. A method for controlling interference in coexisting frequency division duplex (FDD) and time division duplex (TDD) systems where a TDD user is experiencing interference, the method comprising:

handing over wireless transmit and receive units (WTRUs) located in an area with TDD and FDD service and operating in a carrier band that is adjacent to a TDD carrier band from the adjacent carrier band to a carrier band that is alternate to the TDD carrier; and

handing over WTRUs located in an area with FDD service and operating in the alternate carrier band from the alternate carrier band to the adjacent carrier band.

15. A wireless transmit and receive unit (WTRU) capable of providing an escape mechanism according to interference type, the WTRU comprising:

an uplink transmitter;

a circuit for measuring interference in a plurality of uplink time slots;

a circuit for transmitting the measured interference to a radio network controller through the uplink transmitter, wherein the radio network controller can compute a measure of variance between the time slots if interference in active time slots exceeds a first predetermined value; and

a circuit for employing time division duplex escape mechanisms if the variance is above a second predetermined value and employing a handover escape mechanism if the variance is below the second predetermined value.

16. A wireless communications network in which a plurality of wireless transmit and receive units (WTRUs) communicate with a plurality of base stations, and the WTRUs utilize an escape mechanism according to interference type, the network comprising:

- a circuit for scheduling transmission so that interference may be measured at all of a predetermined group of time slots;

- a circuit for providing measured interference to a radio network controller and computing a measure of variance between the time slots if interference in active time slots is above a first predetermined value; and

- a circuit for employing time division duplex escape mechanisms in the case of the variance above a second predetermined value, and employing a handover escape mechanism in the case of the variance below the second predetermined value.